

CIVIL, CONSTRUCTION, AND ENVIRONMENTAL ENGINEERING

OREGON STATE UNIVERSITY

College of Engineering

KLINGEMAN, Peter C.
Professor

BIRTH DATE
May 31, 1934

DEGREES

- B.S., Civil Engineering, Northwestern University, 1957
- M.S., Civil Engineering, Northwestern University, 1959
- Ph.D., Civil Engineering, University of California, Berkeley, 1965

ACADEMIC POSITIONS

- Assistant Professor, North Dakota State University, 1959
- Teaching Associate, University of California, Berkeley, 1959-1962
- Research Associate, University of California, Berkeley, 1959, 1962-1964
- Visiting Assistant Professor, University of California, at Universidad Catolica de Chile, 1964-1965
- Assistant Professor, Oregon State University, 1966-1968
- Associate Professor, Oregon State University, 1968-1976
- Assistant Director, Water Resources Research Institute, Oregon State University, 1968-1969
- Acting Director, Water Resources Research Institute, Oregon State University, 1970, 1975
- Academic Guest, Swiss Federal Institute of Technology, Zurich, 1973-1974
- Director, Water Resources Research Institute, Oregon State University, 1975-1989
- *Professor, Oregon State University, 1976-present
- Acting Assistant Dean for Academic Affairs, OSU College of Engineering, July-Oct. 1989
- Acting Department Head, Civil Engineering Department, Oregon State University, 1989-1991
- Head Undergraduate Advisor, Civil Engineering Department, Oregon State University, 1991-1995

NON-ACADEMIC POSITIONS

- City Engineer's Office, Highland Park, Illinois, 1954-1955 (Engineer Trainee; streets and water systems)
- Harza Engineering Company, Chicago, Illinois, 1956-1957 (Engineer Trainee, Engineer; dam design, river and pipeline analyses)
- Federal Highway Administration, Region 8 as Hydraulic Engineer, Summer, 1971 (Bridge pier scour study for Western Oregon)
- *Various consulting assignments involving public agencies, private organizations and firms, and individuals, through Peter C. Klingeman, Professional Engineer. Consulting activities have dealt with natural and artificial spawning beds, fish passage improvement in natural channels, river and reservoir sedimentation, river course changes, river bank and channel erosion, reservoir bank erosion, cofferdam scour and failure, dike construction, dike and levee failures, streambank stabilization techniques, sediment and erosion problems from highway construction, river gravel resource management, river impacts of airport expansion, flood control operation, and hydropower diversions, reservoir operation and irrigation water supplies, urban flood plain hydrology, urban flooding related to culvert design, upstream flooding due to dam backwater.
- Technical Steering Panel, Hanford Environmental Dose Reconstruction Project, 1988-1994

*Denotes current position

Member, Snake River Salmon Recovery Team, National Marine Fisheries Service, 1991-1996

UNIVERSITY RESEARCH

University of California, Berkeley, 1962-1964

Wind-Blown Sands (University of California), 1960

Sediment-Radionuclide Transport in San Francisco Bay System (California State Legislature/U.S. Atomic Energy Commission), 1962-1964

Oregon State University, 1966-

Hydrology of Water Yield Prediction (USDI-OWRR), 1966-1972

Efficiency Tests of Subdrain Pipes (Oregon State Highway Department), 1967-1968

Studies on Effects of Watershed Practices on Streams (USDI-FWPCA), 1968-1970

Environmental Studies, Silvies River Basin (U.S. Army Corps of Engineers, Walla Walla District), 1970

Hills Creek Reservoir Turbidity Study (U.S. Army Corps of Engineers, Portland District), 1970-1971

General Planning Methodology for Analysis of Estuarine Natural Resources (Pacific Northwest River Basins Commission; Oregon Study Team), 1972

Streambed Degradation in Western Oregon (USDI-OWRR), 1972-1973

Dredge Spoil Distribution and Estuarine Effects (NSF-RANN), 1972-1974

Sediment Transport and River Development Practices in Switzerland (OSU Sabbatical Leave), 1973-1974

Study on Energy Costs of Water Quality Improvement (U.S. EPA), 1974-1976

Development of Methods to Stabilize Willamette Basin Streambanks by Natural Means (U.S. Army Corps of Engineers, Portland District), 1975-1976

Transport of Bed Sediments in Coarse-Bedded Streams During Transient Flows (NSF), 1975-1979

Huckleberry Mountain Hydrologic Monitoring Network (U.S. EPA), 1976

Snowload Case Studies (U.S. Army Cold Regions Research & Engineering Laboratory), 1976-1978

Water for Oregon's Future; Conference Background Paper (Portland State Univ. Institute for Policy Studies), 1977

Berry Creek Hydrologic Monitoring Network (U.S. EPA), 1977

Water Resources Section for Draft Phase I of State Economic Development Plan (Oregon Department of Economic Development), 1977

Resource Survey of Low-Head Hydroelectric Potential -- Pacific Northwest Region (U.S. DOE), 1977-1979

Water Assessment for Energy Technologies (PNRBC), 1979-1980

Willamette River Sediment Transport Investigation (U.S. Army Corps of Engineers, Portland District), 1979-1980

Research Assessment and Coordination: Water-Related Aftereffects of the Mt. St. Helens Eruption (USDI-OWRT), 1980-1983

Sturgeon Lake Restoration: Phase I Diagnostic/Feasibility Study (U.S. EPA via state and local sponsors), 1980-1982

Information Program to Facilitate Small-Scale Hydroelectric Development (U.S. DOE), 1980-1981

Riparian Zone Task Force (USDI-OWRT), 1982-1984

Hydropower Steamflow Data Requirements; Hydrologic Research Services (Oregon DOE), 1982

Preliminary Appraisal of Salmonid Fishery Enhancement Using Rock Structures in Lower Meacham Creek (Umatilla Confederated Tribes), 1983

Sediment Monitoring Program - Sturgeon Lake Phase II Lake Restoration Project (West Multnomah Soil & Water Conservation District, Ore. DEQ, Ore. Dept. of Fish & Wildlife, U.S. EPA), 1986-1987

Medford Rogue River Water Intake Study (Medford Water Commission), 1987

Application of Economic Analysis to Water Allocations and Fish Habitat Enhancements, John Day Basin (USDI-GS), 1987-1990

Restoration of the Salmon River Salt Marshes: Retrospect and Prospect (U.S. EPA; Region 10), 1988-1989

- Wind Energy Data Base Management and Energy Forecasting: Climate Influences on Energy Planning (Bonneville Power Administration), 1988-1989
- Motorboat-Induced Streambank Erosion on the Lower Deschutes River (Oregon State Marine Board and Oregon Department of Transportation, Parks and Recreation Division), 1989
- Federal-State Cooperative Water Resources Research Institute Program (USDI), annually, 1975-1989
- Sturgeon Lake Fecal Coliform Sampling, Testing and Data Interpretation (Oregon Department of Fish & Wildlife), 1991
- Sturgeon Lake Sedimentation Monitoring Program, 1991-1994 (Oregon Department of Environmental Quality), 1991-1994
- Gravel Management to Protect River Uses (USDI-Geological Survey), 1991-1993
- Management of Human Waste in the Backcountry of Mt. Rainier National Park (USDI-National Park Service), 1991-1993
- Rogue River Erosion/Deposition Study (USDI-Bureau of Land Management), 1992-1993
- Tualatin River Basin Data Evaluation and Recommendations (Oregon DEQ), 1992-1993
- Dredging Work Plan for Dairy Creek (Oregon DEQ), 1993-1994
- Salmon Habitat Study: Gravel Removal, Salmon Habitat and Stream Health (Oregon DSL), 1994-1995
- New River Instream Flow Study (USDI-Bureau of Land Management), 1995-1998
- Low-Flow Augmentation through Market Transfers of Deschutes River Water (USDA-Cooperative State Research Service), 1995-1997
- Water Quality Monitoring for Blaine Road Reconstruction; Nestucca River, Oregon (USDOT-Federal Highway Administration), 1995-1998
- Hydrologic Component -- Assessment of Economic Tradeoffs Between Environmental Quality and Agricultural Production: The Case of the Klamath Basin (USDA Cooperative Program), 1997-1998
- Culvert Fish Passage Improvement Training (Oregon Department of Transportation), 1998-1999
- Forebay Model Study of Flow Alterations for Improved Fish Passage at T.W. Sullivan Hydroelectric Plant, Willamette Falls, Oregon (Portland General Electric – ENRON), 1998-1999
- Rogue River Channel and Hydraulic Analysis for Medford Water Intake (Medford Water Commission), 1998-1999
- Truax Site Restoration – Preliminary Hydrology and Terrain (Oregon Department of Fish and Wildlife), 1999
- *Long-Term Willamette River Restoration Possibilities and Impacts of Physical Processes on River Processes (USDI-Geological Survey), 1999-present
- *Vegetated Riprap Stability: Phase 1 Analysis (Oregon Department of Transportation), 1999-present
- *Restoration of Aggregate Mining Areas in the Willamette River Floodplain (Oregon Watershed Enhancement Board), 1999-present

FIELDS OF SPECIALIZATION

Applied Hydrology
River and Estuarine Processes, Hydraulics and Sediment Transport
Water Resource Planning, Management and Development
Problem Analysis and Impact Assessment
Hydraulic Structures

*Denotes current projects

PROFESSIONAL ACTIVITIES

Registration

State of Oregon, No. 5941

Professional Societies

American Society of Civil Engineers
International Association for Hydraulic Research

Professional Recognition

Phi Eta Sigma
Tau Beta Pi
Special Recognition as “Profesor Extraordinario” by the Fundacion de Ingenieros de la Universidad Catolica de Chile
Honorary Member of Fundacion de Ingenieros de la Universidad Catolica de Chile
Listings in *American Men and Women of Science*, *Who’s Who in the West*, *Who’s Who in Technology Today*, and *Who’s Who in Technology*
1975 Winner of the Loyd Carter Award “For Outstanding and Inspirational Teaching,” Oregon State University School of Engineering
1977 ASCE National Office Award for “Outstanding Service on Behalf of Students in Engineering Programs”
1983 Karl Emil Hilgard Hydraulic Prize for research paper of superior merit published by the Hydraulics Division, ASCE
1988: Sea Grant Pioneer Award, on 20th anniversary of OSU Sea Grant College Program
1994 Outstanding Civil Engineer; award by Oregon Section ASCE in recognition of contributions to profession and ASCE

Committees, Commissions and Boards

Member, Research Council, Oregon State University, 1971-1973
University Representative to Universities Council on Water Resources, 1968-1989
Member, Governing Board, Water Resources Research Institute, 1966-1969, 1972-1975
Member, Watershed Management Advisory Commission to the City Council, Corvallis, 1975-1986
Member, Scientific/Technical Advisory Group, South Slough Estuarine Sanctuary, 1978-1981
Member, Joint Committee of National Societies for Metrication in Water Resources, (also American National Metric Council, Water Resources Sector Committee, since 1982) (UCOWR Representative), 1978-1985
Member, Governor’s Task Force on Hydropower, 1979-1980
Member, Hydroelectric Planning Group, Governor’s Office, 1980-1985
Member, Board of Directors, Universities Council on Water Resources, 1980-1983
Member, Advisory Board, Oregon High Desert Museum, 1980-1983
Member, Corvallis-Philomath Buffer Committee, 1982-1983
Member, Advisory Committee on Water Data for Public Use, U.S. Geological Survey (UCOWR Representative), 1982-1985
Member and Chair, ASCE Hydraulics Division Awards Committee, 1983-1987
Corresponding Member, Secretary, Vice Chair, Chair, Post Chair, ASCE Hydraulics Division Sedimentation Committee, 1986-1993
Oregon Section ASCE: Director, 1986-1988; Secretary, 1991-1992; Vice President, 1992-1993; President-Elect, 1993-1994; President, 1994-1995; Past President, 1995-1996

Program Chair, Vice President, President, Past President, Willamette Branch ASCE, 1985-1989
Member, Technical Advisory Committee to Strategic Water Planning Group, Governor's Office, 1984-1985
Member and Chair, Statewide Basin Planning Advisory Committee, Oregon Water Resources Department, 1986-1988
Member, Water Conservation Committee, Oregon Water Resources Department, 1987-1988
Member, Oregon Drought Council, Oregon Emergency Management, Executive Department, 1991-1994
Member, Technical Working Group for Wetlands Rating Methodology, Oregon Department of Environmental Quality & Division of State Lands, 1991-1992
Member, U.S. Geological Survey Panel to Evaluate State Water Resources Research Institute Program, 1993-1994
Chair, Technical Advisory Committee on Erosion Control from Small Construction Sites, Oregon Department of Environmental Quality, 1996-1998
Chair, Task Committee on Sedimentation Engineering in River Restoration, ASCE Water Resources Engineering Division Sedimentation Committee, 1996-1999
Member, Peak Flow Working Group, Oregon Water Resources Department, 1997-1998
Member, State Flood Control Plan Task Force, Oregon State Legislature, 1998
*Chair, Technical Committee on River Restoration, ASCE Environmental and Water Resources Institute, 1999-present

PUBLICATIONS

Books, Booklets and Circulars

System International d'Unites: Metric Measurement in Water Resources Engineering, Universities Council on Water Resources, University of Nebraska, Lincoln, 1976, 11 pp.
Micro-Hydropower: Oregon Development Guide, (with Greg Wheeler), Extension Circular 1096, Oregon State University Extension Service, Corvallis, 1982, 12 pp.
Gravel Bedload Transport Processes, (with W.W. Emmett), Chapter 7 in *Gravel-Bed Rivers*, Hey, Bathurst and Thorne, Editors, John Wiley & Sons, 1982, pp. 141-180.
Discussion of Chapter 3, River Bed Gravels: Sampling and Analysis, in *Sediment Transport in Gravel-Bed Rivers*, Thorne, Bathurst, and Hey, Editors, John Wiley & Sons, 1987, pp. 81-83.
Discussion of Chapter 4, Bed Load Sampling and Analysis, in *Sediment Transport in Gravel-Bed Rivers*, Thorne, Bathurst, and Hey, Editors, John Wiley & Sons, 1987, p. 116.
Discussion of Chapter 19, Bed Load Transport Measurements by Vortex-Tube Trap in Virginia Creek, Italy, in *Sediment Transport in Gravel-Bed Rivers*, Thorne, Bathurst, and Hey, Editors, John Wiley & Sons, 1987, pp. 606-607.
Discussion of Chapter 30, A Case Study of Minimum Streamflow for Fishery Habitat in the Yampa River, in *Sediment Transport in Gravel-Bed Rivers*, Thorne, Bathurst, and Hey, Editors, John Wiley & Sons, 1987, pp. 944-945.
Environmental Trends in River Engineering in the U.S. Pacific Northwest. Symposium Text Book, Symposia in Tokyo and Nagoya, Japan, Technical Research Center for Riverfront Development, Tokyo, Japan, May 1996, 161 pp.
River Engineering to Restore and Re-Naturalize Rivers. Technology Research Center for Riverfront Development, Tokyo, Japan, 1998, 132 pp. (in Japanese translation)

*Denotes current committees

- Gravel-Bed Rivers in the Environment*. (Klingeman, Beschta, Komar and Bradley, Editors). Water Resources Publications, Highlands Ranch, Co, 1998, 832 pp.
- Introduction, Chapter 1 in *Gravel-Bed Rivers in the Environment*. (Klingeman, Beschta, Komar and Bradley, Editors). Water Resources Publications, Highlands Ranch, CO, 1998, pp. 1-4.
- Hydropower Reach By-Passing and Dewatering Impacts in Gravel-Bed Rivers, (with J.-P. Bravard, Y. Giuliani, J.-M. Olivier, G. Pautou), Chapter 15 in *Gravel-Bed Rivers in the Environment*. (Klingeman, Beschta, Komar and Bradley, Editors). Water Resources Publications, Highlands Ranch, CO, 1998, pp. 313-344.

Technical Journals

- “Drainage Density in Drift-Covered Basins,” (with M.C. Roberts), discussion of paper by J.F. Orsborn, *Journal of the Hydraulics Division*, ASCE, Vol. 96, No. HY 7, July 1970, pp. 1656-1657
- “The Influence of Landform and Precipitation Parameters on Flood Hydrographs,” (with M.C. Roberts), *Journal of Hydrology*, North-Holland Pub. Co., Amsterdam, Vol. XI, No. 4, November 1970, pp. 393-411.
- “Hydrologic Evaluations in Bridge Pier Scour Design,” *Journal of the Hydraulics Division*, ASCE, Vol. 99, No. HY 12, December 1973, pp. 2175-2184.
- “Sediment Transport at Low Shields-Parameter Values,” (with E. Helland-Hansen and R.T. Milhous), *Journal of the Hydraulics Division*, ASCE, Vol. 100, No. HY 1, January 1974, pp. 261-265.
- “Restoring the Willamette River: Costs and Impacts of Water Pollution Control,” (with E.S. Huff), *Journal of the Water Pollution Control Federation*, Vol. 48, No. 10, October 1976, pp. 2410-2415.
- “Bedload and Size Distribution in Paved Gravel-Bed Streams,” (with G. Parker and D.G. McLean), *Journal of the Hydraulics Division*, ASCE, Vol. 108, No. HY 4, April 1982, pp. 544-571.
- “On Why Gravel Bed Streams are Paved,” (with G. Parker), *Water Resources Research*, Vol. 18, No. 5, October 1982, pp. 1409-1423.
- “Ensuring the Security of Public Water Supplies,” (with P.J. Ownbey and F.D. Schaumburg), *Journal of the American Water Works Association*, Vol. 80, No. 2, February 1988, pp. 30-34.
- “Suspension of Fine-Grained Sediment,” (with N. Talebbeydokhti), *Iranian Journal of Science and Technology*, Vol. 16, No. 1, 1992, pp. 29-42.
- “Developing a Bioeconomic Model for Riverine Management: Case of the John Day River, Oregon,” (with R. Adams, R. Berrens, A. Cerda, and H. Li), *Rivers*, Vol. 4, No. 3, July 1993, pp. 213-226.
- “Les impacts morphodynamiques sur un cours d’eau soumis a un aménagement hydroélectrique a derivation: le Rhone en Chautagne (France),” (with J-P. Bravard and Y. Giuliani), *Revue de Géographie de Lyon*, Vol. 69, No. 1/94, 1994, pp. 73-87.
- “Calibrated Parker-Klingeman Model for Gravel Transport,” (with P.D. Bakke, P.O. Basdekas, and D.R. Dawdy), *Journal of Hydraulic Engineering*, ASCE, Vol. 125, No. 6, Jun 1999, pp. 657-660.

Conference Proceedings (Published)

- “Considerations on the Siting of Outfalls for the Sea Disposal of Radioactive Effluent in Tidal Waters,” (with W.J. Kaufman), on discussion of paper by R.T.P. Whipple, *Advances in Water Pollution Research*, Vol. 3, Proc. of Conf. on Water Pollution Research, London, 1962, MacMillan Co., New York, 1964, pp. 18-26.
- “Bed-Load Transport in Mountain Streams,” (with R.T. Milhous), presented at the ASCE Hydraulics Division Specialty Conf., Iowa City, August 18-20, 1971 (Abstract).
- “The Relationship of Drainage Net Fluctuations and Discharge,” (with M.C. Roberts), *International Geography 1972*, Proc. of the 22nd International Geographical Congress, Canada, Adams and Helleiner, Editors, University of Toronto Press, 1972, pp. 189-191.

- “General Planning Methodology for Estuarine Natural Resources,” *Proceedings, Third Annual Technical Conference on Estuaries of the Pacific Northwest*, Oregon State University, Corvallis, 1973.
- “Sediment Transport System in a Gravel-Bottomed Stream,” (with R.T. Milhous), *Hydraulic Engineering and the Environment*, Proceedings of the 21st Annual Hydraulics Division Specialty Conference, ASCE, Bozeman, MT, August 15-17, 1973.
- “Surveys of Energy Potential: Introduction,” in *Low Head Hydro, an Examination of an Alternative Energy Resource*, (Gladwell and Warnick, eds.), Idaho Water Resources Research Institute, University of Idaho, Moscow, September 1978.
- “Hydropower Resource Survey of the Pacific Northwest, U.S.A.,” (Gladwell, et al.), *Proceedings III World Congress on Water Resources*, The International Water Resources Association, Mexico City, Vol. 2, 1979, pp. 878-887.
- “Short-Term Considerations on River Gravel Supply,” *Salmon-Spawning Gravel: A Renewable Resource in the Pacific Northwest?* Proceedings of October 6-7, 1980 Conference, Seattle, State of Washington Water Research Center, Washington State University, Pullman, March 1981, pp. 123-139.
- “The OSU-WRRI Inventory of Oregon’s Hydroelectric Power Potential,” Proceedings of October 5-6, 1981 Portland, Conference, *Megawatts for Small Hydro*, Oregon State University, Water Resources Research Institute, Corvallis, 1981.
- “Environmental Considerations in Small Hydro Development in Oregon,” Proceedings of October 5-6, 1981 Portland Conference *Megawatts for Small Hydro*, Oregon State University, Water Resources Research Institute, Corvallis, 1981.
- “Incipient Resuspension of Silt-Clay Sediment,” (with N. Talebbeydokhti), *Water for Resource Development*, D.L. Schreiber, Editor, Proceedings of the Hydraulics Division Specialty Conference, ASCE, Coeur d’Alene, ID, August 14-17, 1984, pp. 72-76.
- “Flow and Scour Patterns Around Gabion Structures,” (with Y.A. Owusu), *Water for Resource Development*, D.L. Schreiber, Editor, Proceedings of the Hydraulics Division Specialty Conference, ASCE, Coeur d’Alene, ID, August 14-17, 1984, pp. 281-285.
- “Local Scour at Fish Rocks,” (with A.C. Fisher), *Water for Resource Development*, D.L. Schreiber, Editor, Proceedings of the Hydraulics Division Specialty Conference, ASCE, Coeur d’Alene, ID, August 14-17, 1984, pp. 286-290.
- “Willamette River Adjustments to New Spur Dikes,” (with S.M. Kehe), *Water for Resource Development*, D.L. Schreiber, Editor, Proceedings of the Hydraulics Division Specialty Conference, ASCE, Coeur d’Alene, ID, August 14-17, 1984, pp. 296-300.
- “Evaluating Hydrologic Needs for Design of Stream Habitat Modification Structures,” *Pacific Northwest Stream Habitat Management Workshop*, T.J. Hassler, Editor, Proceedings of American Fisheries Society Workshop, Arcata, CA, October 10-12, 1984, pp. 191-213.
- “Geomorphic Influences on Sediment Transport in the Willamette River,” *Erosion and Sedimentation in the Pacific Rim*, Proceedings of the Corvallis Symposium, August 1987, IASH Publ. No. 165, 1987, pp. 365-374.
- “Flushing of Fine Sediment From a Coarse-Bed Stream,” (with A. Mohammadi), Proceedings (Abstract), Third International Iranian Congress of Civil Engineering, University of Shiraz, Shiraz, Iran, May 14-18, 1990, pp. 41-42.
- “Sediment Transport and Aquatic Habitat in Gravel-Bed Rivers,” (with R.C. MacArthur), *Hydraulic Engineering*, H.H. Chang and J.C. Hill, Editors, Proceedings of the 1990 National Conference, Hydraulics Division, ASCE, San Diego, CA, July 30-August 3, 1990, pp. 1116-1121.

- “Snake River Salmon Recovery Plan Development,” (with J. Litchfield), *Water Management in the 90s; A Time for Innovation*, K. Hon, Editor, Proceedings of the 20th Anniversary Conference, Water Resources Planning and Management Division, ASCE, Seattle, WA, May 3-5, 1993, pp. 160-163.
- “Incipient Motion in Gravel-Bed Rivers,” (with H. Matin), *Hydraulic Engineering '93*, H.W. Shen, S.T. Su and F. Wen, Editors, Proceedings of the 1993 National Conference, Hydraulics Division, ASCE, San Francisco, CA, July 25-30, 1993, pp. 707-712.
- “Scour Development at Isolated River-Bed Obstacles,” (with C.C. Huang), *Hydraulic Engineering '93*, H.W. Shen, S.T. Su and F. Wen, Editors, Proceedings of the 1993 National Conference, Hydraulics Division, ASCE, San Francisco, CA, July 25-30, 1993, pp. 989-994.
- “Radionuclide Transport in the Columbia River from Hanford Operations,” (with M. Richmond, W. Walters and B. Gilmore), *Environmental Restoration*, Proceedings of the 1994 Annual Meeting of the Universities Council on Water Resources, Big Sky, MT, August 2-5, 1994, pp.
- “River Meander Zones and Floodplain Reconnection,” (with D.A. Bella and H.W. Li), Proceedings of the *North American Water and Environment Congress '96*, C.T. Bathala, Editor, ASCE, Anaheim, CA, June 24-28, 1996. CD format, no page numbering B Session W-11.
- “Surface Bypass-Collector Concepts and Performance,” (with L.M. Wieland, K.R. Elbert, and T.K. Lorz), Proceedings of the *North American Water and Environment Congress '96*, C.T. Bathala, Editor, ASCE, Anaheim, CA, June 24-28, 1996. CD format, no page numbering B Session C-30.
- “Sedimentation Engineering for River Restoration Workshop,” (with R.D. Hey, R. Seal, F.D. Shields Jr., and W.T. Fullerton), Proceedings of the 27th Congress of the International Association for Hydraulic Research -- Water for a Changing Global Community; Hosted by Water Resources Engineering Division, ASCE, San Francisco, CA, August 10-15, 1997, Vol. 1, Proceedings of Theme B, pp. 442-443.
- “Conceptualization for Long-Reach River Restoration,” Proceedings of the Wetlands Engineering & River Restoration Conference 1998, ASCE, Denver, CO, March 22-27, 1998, pp. (in press).
- “Institutional Structures for River Restoration,” (with C.L. Smith), *Water Resources Engineering '98*, S.R. Abt, J. Young-Pezeshk & C.C. Watson, Editors, Proceedings of the International Water Resources Engineering Conference, ASCE, Memphis, TN, August 3-7, 1998, pp. 654-659.
- “River Restoration and Near-Channel Gravel Mining,” *Water Resources Engineering '98*, S.R. Abt, J. Young-Pezeshk and C.C. Watson, Editors, Proceedings of the International Water Resources Engineering Conference, ASCE, Memphis, TN, August 3-7, 1998, pp. 672-677.

Conference Papers (No Proceedings Published)

- “A Preliminary Investigation of Radioactivity and the Estuarine Environment,” presented at the Berkeley Meeting on Isotope Applications to Surface and Ground Water Hydrology, September 5-7, 1962.
- “Use of Radioactive Fallout in Tracing the Movement of Sediments in a River-Estuary System,” (with W.J. Kaufman), presented at the ASCE Environmental Engineering Conference, Salt Lake City, May 11-15, 1964.
- “Characteristics of Fallout Movement with Suspended Sediment in a River-Estuary System,” presented at 13th Annual Meeting of the Pacific Northwest Region, American Geophysical Union, Corvallis, OR, August 15-16, 1966.
- “Oak Creek Vortex Bed-Load Sampler,” (with R.T. Milhous), presented at 17th Annual Pacific Northwest Regional Meeting, American Geophysical Union, Tacoma, WA, October 14-16, 1970.
- “Hydrologic Aspects of Bridge Pier Scour Design in the Pacific Northwest,” presented at 19th Annual Pacific Northwest Regional Meeting, American Geophysical Union, Vancouver, B.C., Canada, October 16-17, 1972.

- “Restoring the Willamette River: Costs and Impacts of Water Pollution Control,” (with E.S. Huff), presented at the 48th Annual Conference, Water Pollution Control Federation, Miami, FL, October 6, 1975.
- “Restoring the Willamette River: Costs and Impacts of Water Pollution Control,” (with E.S. Huff), presented at the 42nd Annual Conference, Pacific Northwest Pollution Control Association, Boise, ID, October 22-24, 1975.
- “Physical Data Needs for Evaluation Programs,” *Stream Habitat Enhancement Evaluation Technical/Training Workshop*, J. Buell, Editor, Portland, OR, October 21-23, 1986.
- “Need for Conceptual Modeling of Sediment Transport,” presented at the 1988 National Conference on Hydraulic Engineering, Colorado Springs, CO, August 8-12, 1988.
- “Fluid Jetster Teaches Basics to Juniors,” (with D.A. Bella), presented at 52nd Annual Meeting, Pacific Northwest Section, American Society for Engineering Education, Seattle, WA, May 18-19, 1990.
- “Long-Term Changes and Impacts: What Place in Natural Resource Management?” presented at 1995 Oregon Section Meeting, American Institute of Hydrology, theme: Stresses Placed on Water Resources and Aquatic Biota by Managing Natural Resources, Ashland, OR, October 16-17, 1995.
- “Stability of Stream Habitat Improvement Structures,” presented at 10th International Stream Habitat Improvement Workshop, Salmon Habitat: Operational Solutions to Problems in Forested Steams, Corvallis, OR, August 19-22, 1996.

Reports and Others

- “The Development, Construction and Utilization of an Electrolytic Analog System,” M.S. Project Report, Northwestern University, Evanston, IL, 1958.
- “Nature and Disposition of Sediment Sorbed Radionuclides Entering San Francisco Bay,” (with W.J. Kaufman), *Transport of Radionuclides in Fresh Water Systems*, U.S. Atomic Energy Commission Publication TID-7664, 1963, pp. 149-159.
- Transport of Radionuclides with San Francisco Bay Sediments*, (with W.J. Kaufman), Progress Report, University of California, Sanitary Engineering Research Laboratory, Berkeley, 1963.
- Transport of Radionuclides with Suspended Sediment in Estuarine Systems*, Ph.D. Thesis, University of California, Berkeley, 1965.
- Transport of Radionuclides with Suspended Sediment in Estuarine Systems*, (with W.J. Kaufman), University of California, Sanitary Engineering Research Laboratory, SERL Report No. 65-15, Berkeley, 1965.
- “Engineering Aspects of Diversion Proposals,” *Northwest-Southwest Water Diversion Issues*, Oregon State University, Water Resources Research Institute, Corvallis, 1967, pp. 11-30.
- Efficiency Tests of Subdrain Pipes*, (with L.S. Slotta), Oregon State University, Corvallis. Report submitted to Oregon State Highway Commission and the Bureau of Public Roads, U.S. Dept. of Commerce, 1968.
- Spawning Bed Structures for the Lower Alsea River*, Oregon State University, Water Resources Research Institute, Corvallis, 1968.
- Evaluation of Bed Load and Total Sediment Yield Processes on Small Mountain Streams*, (with R.T. Milhous), Final Sub-Project Report, Oregon State University, Corvallis, 1970.
- “Some Thoughts on Western Oregon 100 Years from Now,” *Oregon State Engineer*, Corvallis, Vol. 6, No. 2, January 1971.
- Environmental Considerations and the Water Resources of the Silvies Basin*, (Klingeman, et al.), Oregon State University, Water Resources Research Institute, Report No. WRRRI-6, Corvallis, 1971.
- Studies on Effects of Watershed Practices on Streams*, (with Krygier and Brown), Oregon State University, Schools of Forestry and Engineering, Corvallis. Project completion report to

- Environmental Protection Agency, U.S. Environmental Protection Agency Water Pollution Control Research Series 13010 EGA 02/71, February 1971.
- Prediction of Pier Scour in Western Oregon*, Report submitted to the Federal Highway Administration, U.S. Department of Transportation, Region 8, Portland, OR, 1971.
- Hills Creek Reservoir Turbidity Study*, (Klingeman, et al.), Oregon State University, Water Resources Research Institute, Report No. WRRRI-14, Corvallis, 1971.
- PIA Environmental Impact Study; Natural Resource Study Phase; Chapter B: Potential Hydrologic and Hydraulic Impacts of the PIA Expansion Plan and Alternatives*, (with R.T. Milhous), Oregon State University, Water Resources Research Institute, Corvallis, 1972.
- General Planning Methodology for Oregon's Estuarine Natural Resources*, (with D.A. Bella), Oregon State University, Water Resources Research Institute, Corvallis, 1973.
- Descriptions and Information Sources for Oregon's Estuaries*, (with K.L. Percy, D.A. Bella), Oregon State University, Water Resources Research Institute, Report No. WRRRI-19-1, Corvallis, 1973.
- "What is an Environmental Impact Statement?," *How Effective are Environmental Impact Statements?*, Oregon State University, Water Resources Research Institute, Corvallis, 1973, pp. 1-9.
- Engineering Hydrology*, Oregon State University, Water Resources Research Institute, Corvallis. Final project report to Office of Water Resources Research, U.S. Dept. of Interior, 1973.
- Indications of Streambed Degradation in the Willamette Valley*, Oregon State University, Water Resources Research Institute, Report No. WRRRI-21, Corvallis, 1973.
- Oregon's Estuaries: Descriptions and Information Sources for Oregon's Estuaries*, (with K.L. Percy, C. Sutterlin, D.A. Bella), Oregon State University, Water Resources Research Institute and Sea Grant College Program, Corvallis, 1974.
- Willamette River Basin Streambank Stabilization by Natural Means*, (with J.B. Bradley), Oregon State University, Water Resources Research Institute, Corvallis, Project report for U.S. Army Corps of Engineers, Portland District, June 1976.
- Restoring the Willamette River: Costs and Impacts of Water Quality Control*, (Huff, Klingeman, Stoevener and Horton), U.S. Environmental Protection Agency, Environmental Research Laboratory, Athens, Georgia, Report No. EPA-600/5-76-005, September 1976.
- "Energy and Water Diversion," *Energy and Water Resources*, Oregon State University, Water Resources Research Institute, Corvallis, March 1977.
- Oregon's Water Resource: A Summary of Available Information*, Oregon State University, Water Resources Research Institute, Corvallis, March 1977.
- Western Oregon Snowload Case Studies*, (with H.I. Laursen, J. Erwin, T. Howell), Progress Report, Oregon State University, Civil Engineering Department, Corvallis, June 1977.
- Survey of the Potential for Hydroelectric Energy with Solar Energy Development*, (with W.H. Buckley), Oregon State University, Water Resources Research Institute, Corvallis, November 1977.
- Water Resources and Economic Development in Oregon*, (Working Paper with Executive Summary), Oregon State University, Water Resources Research Institute, Corvallis, January 1978.
- Western Oregon Snowload Case Studies*, (with H.I. Laursen, D. Nicoli, J. Erwin, T. Howell), Final Report, Oregon State University, Civil Engineering Department, Corvallis, June 1978.
- Sediment Transport Research Facilities at Oak Creek*, Report F1, 1979.
- A Resource Survey of Low-Head Hydroelectric Potential, Pacific Northwest Region*, (Gladwell, et al.), Completion Report, Phase I (in 10 volumes), U.S. Department of Energy, Report No. DOE/RA/01691-1, March 1979.
- A Resource Survey of River Energy and Low-Head Hydroelectric Power Potential in Oregon*, Oregon State University, Water Resources Research Institute, Report No. WRRRI-61, (synopsis report, main report and 20 appendices), Corvallis, 1979.

- A Resource Survey of Low-Head Hydroelectric Potential at Existing Dams and Proposed Sites in the Pacific Northwest Region*, (Gladwell, et al.), Completion Report, Phase II, U.S. Department of Energy, Report No. DOE/RA/01691-2, September 1979.
- A Resource Survey of the Hydroelectric Potential at Existing and Proposed Dams in Oregon*, Oregon State University, Water Resources Research Institute, Report No. WRRI-62 (main report and 1 appendix), Corvallis, 1980.
- Willamette River Sediment Management Possibilities: Phase I -- Problem Clarification*, Oregon State University, Water Resources Research Institute, Corvallis. Project Completion Report to Office of Water Research and Technology, U.S. Department of Interior, 1979.
- Assessing Stream Potential for Backyard Hydropower*, Oregon State University, Water Resources Research Institute, Corvallis, September 1980.
- Physical, Chemical and Biological Description of Sturgeon Lake*, Technical Report 1 (plus 16 appendices bound in 4 volumes), Sturgeon Lake Restoration Study, Oregon State University, Water Resources Research Institute, Corvallis, 1982.
- Sturgeon Lake Problem Diagnosis, Options for Restoration, and Recommendations*, Technical Report 2, Sturgeon Lake Restoration Study, Oregon State University, Water Resources Research Institute, Corvallis, 1982.
- Streamflow Data Requirements to Assess Micro-Hydropower Potential for Small Rainfall-Regime Basins in Western Oregon*, (with N. Talebbeydokhti and J.M. Pike), (main report and 4 appendices), Oregon State University, Water Resources Research Institute, Corvallis, September 1982.
- Riparian Zone Systems, Uses, and Management: Phase I*, (with W.D. Honey and R.J. Seidler), Oregon State University, Water Resources Research Institute, Corvallis, September 1983.
- Preliminary Appraisal of Salmonid Fishery Enhancement Using Rock Structures in Lower Meacham Creek*, Oregon State University, Water Resources Research Institute, Corvallis, September 1983.
- Hydrologic Implications of Proposed Union Pacific Railroad Track Realignment and Stream Relocation in Lower Meacham Canyon as Related to Streambank Stability and Fish Habitat Enhancement*, Oregon State University, Water Resources Research Institute, Corvallis, December 1983.
- Exploring the University Role in Oregon Water Resources Management*, Summary Notes on the First Interuniversity Water Resources Workshop, held March 3, 1984 at Willamette University, Oregon State University, Water Resources Research Institute, Corvallis.
- Riparian Zone Systems, Uses and Management*, (with W.D. Honey and R.J. Seidler), Oregon State University, Water Resources Research Institute, Corvallis, August 1984.
- Streambank Erosion Protection and Channel Scour Manipulation Using Rockfill Dikes and Gabions*, (with S.M. Kehe and Y.A. Owusu), Oregon State University, Water Resources Research Institute, Report No. WRRI-98, Corvallis, September 1984.
- Director's Technology/Information Transfer Program 1983-1984*, Oregon State University, Water Resources Research Institute, Corvallis, September 1984.
- Estimating and Measuring Impacts of Non-Structural Methods for Increasing Basin Water Yield*, Report of the Third Interuniversity Water Resources Workshop, held May 9, 1986 at Portland State University, Oregon State University, Water Resources Research Institute, Corvallis.
- Non-Consumptive Use, in Oregon Water Law*, Course materials from Oregon Law Institute Seminar, Portland, June 20, 1986, pp. 121-124.
- Environmental Assessment for Sturgeon Lake Restoration Project*, Oregon State University, Water Resources Research Institute, Corvallis, 1987.
- Rogue River Medford Water Intake Study*, (with A.S. Ogston), Oregon State University, Water Resources Research Institute, Corvallis, 1987.

- Fluvial Processes, Hydraulic Structures, and the Development of Information for Management of Water and Sediment in Stream Channels of Ribeira Seca and Ribeira Dos Picos Basins (Cape Verde Report)*, Oregon State University, Water Resources Research Institute, Corvallis, November 1988.
- Annual Report*, (for Programs and Activities Supported in Part by USDI Cooperative Program Funds), Oregon State University, Water Resources Research Institute, Corvallis, annually, 1975-1988.
- The Effects of Climate Change on Energy Planning and Operations in the Pacific Northwest*, Report No. BPA 89-29, Oregon State University, Energy Resources Assessment Laboratory, Corvallis, September 1989.
- Investigation of Motorboat-Induced Streambank Erosion on the Lower Deschutes River*, (with H. Martin and C-C. Huang), Oregon State University, Water Resources Research Institute, Report No. WRRRI-104, Corvallis, February 1990.
- A Bioeconomic Analysis of Water Allocations and Fish Habitat Enhancements, John Day Basin, Oregon*, Oregon State University, Corvallis, August 31, 1990.
- Sturgeon Lake Fecal Coliform Sampling, Testing and Data Interpretation*, (with P.O. Nelson and R.A. Kimerling), Oregon State University, Water Resources Research Institute, Corvallis, June 1991.
- Rogue River Erosion/Deposition Study--Conceptual Report*, (with L. Cordes), Oregon State University, Civil Engineering Department, September 1992.
- Rogue River Erosion/Deposition Study*, (with L.M. Cordes and I. Nam), Oregon State University, Civil Engineering Department, Corvallis, December 1993.
- Etude prealable a la definition d'un schema de gestion pour le Rhone et ses communes riveraines. Diagnostic portant sur l'evolution des vieux Rhone de Chautagne, Belley et Bregnier-Cordon*, (with J-P. Bravard and C. Bevilacqua), 1993.
- Draft Snake River Salmon Recovery Plan Recommendations*, (with Bergman, Bevan, Bjornn, Crutchfield, Harville, and Litchfield), Prepared for Peer Review, NOAA National Marine Fisheries Service, Portland/Seattle, October 1993.
- Snake River Salmon Recovery Team: Final Recommendations to the National Marine Fisheries Service*, (with Bergman, Bevan, Bjornn, Crutchfield, Harville, and Litchfield), (Summary Report, Main Report, Appendices), NOAA National Marine Fisheries Service, Portland/Seattle, May 1994.
- Predesign Analysis for the Restoration of Dairy Creek*, (with J. Hendron), Oregon State University, Civil Engineering Department, Corvallis, April 1994.
- Sturgeon Lake Sedimentation Monitoring Program, 1991-1993*, (with N. Talebbeydokhti, W. Cronin and J. Hendron), Oregon State University, Civil Engineering Department, Corvallis, May 1994.
- Human Wastes Management in Backcountry Areas of Mount Rainier National Park*, (with J. Jetton and P. Nelson), Technical Report NPS/PNROSU/NRTR-95-06, Oregon State University, Civil Engineering Department, Corvallis, April 1995
- Gravel Disturbance Impacts on Salmon Habitat and Stream Health -- Volume 1: Summary Report*, (with K. Williamson, D. Bella, R. Beschta, G. Grant, H. Li and P. Nelson), Oregon State University, Water Resources Research Institute, Corvallis, March 1995.
- Gravel Disturbance Impacts on Salmon Habitat and Stream Health -- Volume 2: Technical Background Report*, (with K. Williamson, D. Bella, R. Beschta, G. Grant, H. Li and P. Nelson), Oregon State University, Water Resources Research Institute, Corvallis, March 1995.
- Estimating the Frequency and Quantity of Surface Runoff within the Tualatin River Basin*, (with G.H. Taylor and J.R. Miner), Oregon State University, Water Resources Research Institute, Corvallis, Report 16, March 1995, 27 pp.
- Evaluation of Alternative Pollution Control Strategies for the Tualatin River Basin, Oregon*, (with 8 co-authors), Oregon State University, Water Resources Research Institute, Corvallis, Final Report, August 1995, 50 pp.

- Final Report, Environmental Transport Subcommittee, May 1988-September 1994*, Technical Steering Panel of the Hanford Environmental Dose Reconstruction Project, Washington Department of Ecology, Olympia, Washington, December 1995, 115 pp.
- “Stability of Stream Habitat Improvement Structures,” in *COPE Report: Coastal Oregon Productivity Enhancement Program*, Vol 10, Nos. 1&2, September 1997, pp. 21-24.
- Water Quality Monitoring for Blaine Road Reconstruction; Nestucca River Oregon*, (with P.O. Nelson, S.L. Fluter, H.R. Hadley), Oregon State University, Civil, Construction and Environmental Engineering Department, Corvallis, June 1998, 57 pp.
- State Flood Control Plan Task Force Report to the 70th Legislative Assembly*, (with 7 co-authors), 69th Legislative Assembly State Flood Control Plan Task Force, State Capital, Salem, Oregon, December 1998, 35 pp.
- Rogue River Channel and Hydraulic Analysis for the Medford Water Intake and Recommendations for Protective Actions*, Oregon State University, Civil, Construction and Environmental Engineering Department, Corvallis, April 1999, 46 pp.
- Truax Gravel Pit Site Analyses: River Hydrology, Site Terrain, and Pit-River Connection*, Oregon State University, Civil, Construction, and Environmental Engineering Department, Corvallis, August 1999, 46 pp.